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**Questioning Darwin-Malthusian hypothesis:
Remark on critics to Darwin's evolutionary process of history, from
Ernst Cassirer to Jaroslav Flegr**

Victor Christianto*,** & Florentin Smarandache***

*Malang Institute of Agriculture, East Java, Indonesia

**Ekklesia Advanced School of Theology, Jakarta, Indonesia. Email:
victor_christianto@sttekklesia.ac.id

***Dept. Mathematics and Sciences, University of New Mexico, Gallup, NM, USA. Email:
smarand@unm.edu

Abstract

As Rev. John Polkinghorne, the late professor of mathematical physics and priest, wrote: "The idea of a ready-made world was replaced by that of a creation so endowed by its Creator with potentiality that creatures could be allowed 'to make themselves' (Charles Kingsley) through the explorations of evolutionary process. The history of the world is to be understood as an unfolding act of continuous creation. Such a creation is a great good, but it has an inescapable shadow side for evolution results not only in great fertility but also in blind alleys and extinctions. Genetic mutation produces both new life forms and also malignancy, and one cannot have the one without the other. Theology can find here some help from science as it wrestles with the perplexities of natural evil and suffering." (cf. Polkinghorne, *The University of Edinburgh*, 2009). Notably several scholars have come up with different arguments to criticize Darwin's evolution theory, for instance Ernst Cassirer, Vern Poythress with *Interpreting Eden*, and Jaroslav Flegr in his book *Frozen evolution, that is not the way it is, mr Darwin*. The present review is intended to bring more arguments, in particular from recent development of nonlinear dynamics attributed to low-temperature physics and its connection to cosmology.

Introduction

Charles Darwin's "*On the Origin of Species*" stands as one good speculative work in the history of science, its theory of evolution by natural selection forever altering our understanding of life. Yet, while the "Darwinian revolution" often receives sole credit, the story behind this pivotal book is more nuanced than commonly portrayed. While discussion on random mutation can be largely influenced by any kind of argument regarding selection/random selection etc, we would like first to mention a number of fallacies in Darwin's propositions, first on his quite careless influenced by Lamarck and also Malthus. This article explores how the ideas of Jean-Baptiste Lamarck, Alfred

Russel Wallace, and Thomas Malthus played crucial roles in shaping Darwin's revolutionary tome. and also possible refutation of the idea of sole evolution as the process in history. We prove that it is possible to conceive history of hominid without considering Out of Africa hypothesis. Moreover, as other authors also criticize Darwin's theory, such as Ernst Cassirer and Abdul Ahad (2014), others have brought up influence to economists, such as Hayek's evolutionary epistemology (Krstic, 2012, Marciano, 2009).

Based on one of us (FS)'s observation to Galapagos islands, and also Smarandache & Vatuiu's hypothesis of spiralling neutrosophic theory, allow us to consider several arguments in the following paragraphs (Smarandache, 2017; Smarandache, 2017; Smarandache & Vatuiu, 2019).

The Forgotten Roots of "Origin": Lamarck, Wallace, and Malthus Shape Darwin's Masterpiece

It is known that there are critics to Darwinian theory of evolution. For instance Vern Poythress, John Lennox and philosophers such as Ernst Cassirer. As van Heusden wrote, "First, of course, that Cassirer was interested in Uexkull's research. Secondly, that he was sensitive to the basically animal-like behavior of humans. Humans, he would say over and over again, are first of all animals. But, he would then add, the human is an animal with capabilities which allow it to escape its animal condition" (van Heusden, 2001).

Firstly, Lamarck's influence on Darwin is often underestimated. Though Lamarck's theory of inheritance of acquired characteristics is now discredited, his emphasis on gradual change and adaptation to environment resonated deeply with Darwin. Lamarck provided a foundation for Darwin to explore how organisms could, over time, modify themselves to fit their surroundings, laying the groundwork for the concept of natural selection.

Secondly, Alfred Russel Wallace, often presented as simply a corroborator of Darwin's theory, deserves greater recognition. Wallace, working independently in the field, arrived at very similar conclusions to Darwin regarding the mechanism of evolution. This independent confirmation strengthened the theory's credibility and lent weight to the idea that it wasn't simply a product of one man's mind.

However, the most profound influence on Darwin's "*Origin*" might not have come from another biologist, but from an economist: Thomas Malthus. Malthus's theory of population growth, which proposed that populations tend to outstrip resources, provided a critical explanation for the struggle for existence that Darwin observed in nature. This struggle, Malthus argued, would inevitably lead to competition and differential survival, the very engine that Darwin's natural selection theory relied upon.

Therefore, Darwin's "*Origin*" was not an invention born solely from his own brilliant mind. It was a masterful synthesis of Lamarck's adaptationism, Wallace's independent confirmation, and Malthus's bleak yet crucial insights into population dynamics. By recognizing these diverse influences, we gain a richer understanding of Darwin's remarkable achievement, appreciating the collaborative nature of scientific progress and the interconnectedness of ideas that led to one of the impactful scientific revolutions of all time (cf. Ahad, 2012)

In conclusion, while Darwin's name rightfully adorns the pages of "On the Origin of Species," we must remember the vital contributions of Lamarck, Wallace, and Malthus. Their ideas provided the soil from which Darwin's genius blossomed, reminding us that scientific breakthroughs are rarely solitary endeavors, but often the fruit of a shared intellectual landscape.

Key arguments in Jaroslav Flegr

While there are many publications have been in print to discuss pros and cons of Darwinism vs creationism etc, for instance Prof John Lennox and Vern Poythress, Interpreting Eden, of notable interests is Jaroslav Flegr's book, "*Frozen Evolution: Or, That's Not the Way It Is, Mr. Darwin,*" whose book throws down a gauntlet to the established theory of evolution by natural selection. According to Flegr, "Most biologists and biology students think that evolutionary biology is basically a closed chapter of science. But what if this is not the way things are? What if evolutionary biology underwent a quite fundamental revolution in the 70's and 80's of the past century." While not outright denying evolution, Flegr proposes a significantly different mechanism for how sexual species change and diversify. Let's dive into his key arguments and see if Darwin should be shaking in his boots.

1. Evolution in spurts, not gradual change: Flegr challenges the Darwinian image of slow, continuous adaptation. He argues that most evolutionary change happens in short bursts of rapid shifts followed by long periods of stasis, a state he calls "evolutionary freezing." This freezing occurs, he claims, when genetic variability within a population reaches a critical point, hindering further adaptation.

2. Frequency-Dependent Selection, the Villain: Unlike traditional views, Flegr proposes that the culprit behind this stasis is not simply lack of selection pressure. He introduces the concept of frequency-dependent selection, where a trait's advantage depends on its prevalence in the population. As a beneficial trait becomes common, its advantage diminishes, eventually stalling selection and locking the species in its current form.

3. Farewell to the Selfish Gene: Richard Dawkins' famous concept of the "selfish gene" doesn't find favor with Flegr. He argues that genes primarily operate at the level of the organism, favoring traits that benefit the whole, not just individual gene replication. This shifts the focus from genes competing to genes cooperating for the organism's survival.

4. A Farewell to Darwin, Too? Not completely. Flegr sees his model as an extension of Darwinism, applicable only to sexual species. Asexual organisms, lacking the complexities of sex and recombination, would still evolve according to Darwin's principles. This makes his theory a potential refinement rather than a complete overthrow.

The Verdict: Time for New Ice Trays?

Flegr's ideas are certainly provocative and offer a fresh perspective on evolution. However, the scientific community largely regards them with skepticism. Critics point to weaknesses in his evidence, like the lack of concrete mechanisms for his proposed stasis and the limited empirical support for frequency-dependent selection as the sole driver of evolution.

While "Frozen Evolution" may not dethrone Darwin overnight, it does spark important questions about the nuances of evolution in sexual species. Whether it's a revolution or a ripple in the pond, Flegr's work reminds us that scientific understanding is an ever-

evolving landscape, and even the most established theories can benefit from a healthy dose of questioning.

Without *Out of Africa* and Beyond Africa origin: Exploring Alternative Theories of Hominid Origins

The "*Out of Africa*" model, which posits that all modern humans originated in Africa and migrated outwards, has long dominated discussions of hominid evolution, partly because it was advocated in Darwin's theory. However, a chorus of dissenting voices challenges this dominant narrative, proposing alternative scenarios about our ancient past. This article delves into two contrasting perspectives on hominid origins, offering a glimpse into the captivating yet unsettled world of human evolution.

Mary Lefkowitz and the "*Black Athena*" Perspective:

American historian Mary Lefkowitz reinterprets historical and archaeological evidence, arguing for a strong cultural continuity between ancient Egypt and Greece. Her criticism of "*Black Athena*" suggests that Greek civilization did not solely arise from independent development but stemmed from an earlier Egyptian foundation. This implies that hominid evolution in these regions might have occurred independently, with early African hominids coexisting with and influencing other evolving hominid lineages elsewhere.

Radu Cinamar and the Controversial Romanian Precursor Model:

Romanian researcher Radu Cinamar's proposition is even more audacious. He posits that Romania represents a crucial cradle of early hominid civilization, predating and influencing the construction of pyramids across the globe, including the Great Pyramid of Giza. While this theory lacks widespread scientific acceptance, it raises the intriguing possibility of hominid lineages developing sophisticated societal structures outside the traditional African cradle.

The theories explored above, while challenging the established narrative, raise further questions about lost civilizations like Mu, Lemuria, and Atlantis. While currently lacking credible scientific evidence, the very existence of these myths reflects a human fascination with our origins and the possibility of advanced hominid cultures predating known history.

A Landscape of Uncertainty:

Although evidence seems to strongly support an African origin for modern humans, alternative perspectives remind us that our understanding of early hominid evolution remains riddled with gaps and uncertainties. As new discoveries and analysis methods emerge, the possibility of diverse hominid lineages and civilizations flourishing across the globe cannot be entirely dismissed.

Instead of clinging dogmatically to a single model, embracing uncertainty and open-mindedness becomes crucial. Rigorous scientific inquiry, critical assessment of evidence, and continued exploration of alternative theories will ultimately illuminate the true complexity of our evolutionary past. Perhaps, someday, the whispers of lost civilizations may find echoes in the unearthed whispers of the ancient hominid record.

Nonetheless, it shall be kept in mind, that the present review article is meant to explore alternative perspectives and does not endorse any specific unproven theories. It should be read as a thought-provoking exercise in considering the complexities of human origins.

Revised Young Earth theories: beyond deep time and exploring Alternative Cosmologies and the "Spontaneous Emergence Creation" Model

The vast expanse of cosmic history, stretching back billions of years, has long been dominated by the "Big Bang" and "evolution-only" paradigm. These models, while supported by considerable evidence, leave certain lingering questions unanswered. This article delves into alternative cosmological perspectives, particularly the fascinating concept of "Spontaneous Emergence Creation" (SEC) proposed by Per Bak and the potential reconciliation with religious narratives like Genesis. (In Per Bak, his model is known as self-organized criticality).

Challenging the Deep Time Narrative:

While the standard cosmological model enjoys scientific consensus, some scientists and theologians propose alternative possibilities. Young Earth theorists, for instance, advocate for a compressed timescale of Earth's history, aligning with a literal interpretation of biblical accounts. Others, like Per Bak, explore models like SEC,

suggesting the universe's emergence not from a singularity but from a state of inherent potentiality.

Spontaneous Emergence Creation: A New Paradigm?

Perbak's SEC model can be interpreted that the universe arises spontaneously from a self-organized critical state without needing a Big Bang singularity. This model resonates with the Genesis 1:1-2 description of the Holy Spirit bringing order to a chaotic void. While this connection remains a matter of theological interpretation, the SEC model presents a scientifically intriguing proposition that challenges the traditional Big Bang narrative.

Non-linear Ermakov Equations and the Dance of Order and Disorder:

One interesting solution of the non-linear Ermakov equations appears to exhibit SEC-like behavior. This solution shows a system transitioning from a disordered state to one exhibiting complex structures, reminiscent of the creation described in Genesis. While not definitive proof of SEC, it provides a tantalizing glimpse into the potential for such models to explain cosmic and biological emergence.

Reconciling Science and Faith, especially on the origin of the Earth:

The question of reconciling scientific and religious narratives surrounding creation remains a complex and ongoing dialogue. Exploring models like SEC and their potential connections to Genesis offers a space for deeper engagement between science and faith traditions.

Ultimately, the quest for understanding the universe's origins requires an open mind and a willingness to explore all avenues of inquiry. Rigorous scientific investigation, open-mindedness to alternative models, and respectful dialogue between science and faith traditions can pave the way for a richer understanding of our cosmic and existential place in the grand scheme of things.

Possible correspondence between low temperature physics and cosmology

In previous sections of this review, we explored the intriguing possibility of reconciling scientific understanding of the early universe with the creation narrative presented in Genesis 1:1-2. We ventured into the fascinating realm of gap theory, which posits a period of "gap" or *dormancy* between the initial burst of creation and the subsequent

shaping of the Earth and its inhabitants (cf. Gen. 1;2, cf. also Walton, *the Lost World of Genesis One*). Today, we delve deeper into this intriguing proposition, specifically examining how certain solutions of nonlinear Ermakov equations, utilized in low-temperature physics, might hold the key to unlocking this cosmic secret.

The connection between Ermakov equations and the gap theory lies in their shared ability to depict sudden transitions from a state of stasis to one of dynamic change. Just as these equations, employed in low-temperature physics, describe abrupt shifts in the behaviour of superfluid helium atoms, the gap theory envisions a similar leap from the initial, formless "void" described in Genesis to the subsequent flourishing of the universe.

Here, imagine the universe in its nascent state as a superfluid-like entity, governed by the Ermakov equations. In this primordial stillness, a quantum fluctuation, a subtle perturbation in the energy field, acts as a critical trigger (which alternatively, such an epoch can be interpreted as an act of God's creation). This, analogous to the "kick" parameter in the equations, initiates a cascade of activity, breaking the symmetry of the void and setting the stage for the unfolding drama of creation.

This confluence of scientific models and scriptural interpretation offers a compelling framework for understanding the Genesis narrative. The "days" of creation, instead of being interpreted literally, can be seen as representing distinct phases within this vast cosmic leap – the emergence of light, the separation of heaven and earth, the formation of land and sea. Each "day" becomes a snapshot of the universe transitioning from its initial inertness to its present vibrant state.

Of course, this theoretical bridge between science and faith is not without its challenges. Critics might argue that invoking physics as an interpretive tool for scriptural passages introduces unnecessary complexity and risks diluting the core message of divine creation. Others might point to the inherent limitations of scientific models in capturing the full sweep of spiritual truths.

Yet, the very act of seeking dialogue between seemingly disparate fields of knowledge – science and religion – holds immense value. It fosters mutual understanding,

encourages deeper reflection on the mysteries of existence, and compels us to constantly revisit our assumptions about the universe and our place within it.

The *gap theory*, viewed through the lens of dynamics of nonlinear Ermakov equations, may not definitively prove or disprove the divine hand in creation. But it offers a unique perspective, a tapestry woven from threads of scientific rigor and scriptural interpretation. And perhaps, in that weaving, lies the spark of a deeper understanding, a glimpse into the grand symphony of existence that unites the quantum dance of atoms with the majestic pronouncements of Genesis.

This is just the beginning of our exploration. In the coming articles, we will delve deeper into the scientific and theological intricacies of this topic, examining the challenges and possibilities it presents. Let us embark on this intellectual journey with open minds and a spirit of inquiry, embracing the potential for discovery that lies at the intersection of science and faith.

Beyond Darwin-Malthusian's random mutation and natural selection: Pan-Christic Biogenesis and the Hidden Forces of Life

The Darwinian paradigm of random mutation and natural selection, fuelled by a Malthusian struggle for survival, has long dominated our understanding of life's evolution. Yet, its mechanistic lens seems to falter before the complex dance of life's emergence and dynamism. Could there be hidden forces at play, orchestrating this symphony of change beyond the simple tug-of-war between chance and competition?

Francesco Redi's famous experiment in 17th century, demonstrating spontaneous generation of organic compounds shall always start with life substance, reminds us that biogenesis is woven into the fabric of our universe. This prompts us to seek alternative frameworks, models that resonate with the inherent vibrancy and purposefulness of life. One such lens lies in Lewin's force field theory of change, where both driving and restraining forces interact to determine a system's trajectory.

In this light, let us envision life's evolution as a dynamic interplay of four hidden forces:

1. Order and Disorder: These opposing forces represent the constant interplay between stability and transformation within living systems. Order maintains coherence and structure, while disorder injects novelty and creativity. Life emerges and thrives in this delicate balance, where structures adapt and mutate, and new forms arise.

2. Synchronization and Individuality: This tension reflects the interconnectedness of life and the unique spark within each organism. Synchronization allows communities to thrive through coordinated action, while individuality drives differentiation and innovation. Life flourishes as these forces dance in harmony, enabling collaboration and the emergence of diverse expressions within a unified whole.

3. Life Essence: This is where we venture beyond the purely material, acknowledging the inherent spark of life within every living being. We propose that this "life essence" is not merely a passive product of chance and selection, but an active principle, a divine breath imbued in all forms by the ultimate Source of Life, which Leibniz, in his pan-Christic vision, might call the Monad.

This life essence is not to be confused with *panentheism* or old idea of *vitalism* in biology, where the divine permeates the universe but doesn't actively participate. Nor is it *monadism*, where individual monads are self-contained and uninfluenced by each other. Pan-Christic biogenesis posits that the life essence is not static, but dynamic, actively involved in the unfolding of life, guiding its trajectory, and imbuing each creature with a unique potential for growth and transformation. In our reading of Genesis 1:1, in Hebrew Bible, we shall read the first verse as follows: “*bereshit bara Elohim (et),*” where aleph tav is not pronounced but it can be understood as presence of Christ in His pre-existence. That is our interpretation of both pan-Christic biogenesis, and in a consistent interpretation with Hebrew meaning of *dabar* or Logos who was with God since the beginning, cf. John 1:1, Colossians chapter 1.¹

Leibniz's "monads with windows" beautifully capture this notion. Each monad, representing a living being, houses its own life essence, its unique spark of the divine,

¹ With special thanks to Prof Pramod, an earlier version of our interpretation of Genesis 1:1 has been presented at 1st Conference of Philosophy Research, held at Malla Reddy University, India, Aug. 2022.

while remaining open to influences from other monads and the overarching divine influence. This interconnectedness fosters both individuality and a shared essence, creating a tapestry of life woven from both autonomy and unity.

Pan-Christic biogenesis, with its focus on the hidden forces of order, disorder, synchronization, and life essence, offers a framework for understanding life that transcends the limitations of purely materialistic perspectives. It recognizes the interplay of chance and determinism, competition and cooperation, and acknowledges the presence of a divine spark within every living creature. This model invites us to see evolution not as a blind struggle for survival, but as a purposeful journey of self-actualization, driven by the inherent potential of life and guided by the unseen hand of the Divine.

While this remains a theoretical landscape, exploring avenues beyond the Darwin-Malthusian program enriches our understanding of life's complexity and opens doors to new avenues of scientific and spiritual inquiry. Perhaps, it is in embracing the interplay of the hidden forces, both material and divine, that we will truly grasp the awe-inspiring dance of life unfolding on our planet.

To find traces of Pan-Christic biogenesis origin in proto-solar system

The alluring proposal of pan-Christic biogenesis, with its focus on hidden forces and divine essence intertwined with evolution, invites us to peek beyond the established narratives of life's emergence. To lend concreteness to this theoretical framework, let's turn our gaze towards the very birth of our solar system, seeking traces of pan-Christic biogenesis in the primordial dance of dust and gas that gave rise to our celestial home.

The early solar system, a swirling nebula known as the protoplanetary disk, presents a compelling canvas for this exploration. This cosmic cradle contained a rich tapestry of organic compounds and complex prebiotic molecules – the building blocks of life – as evidenced by meteorites and comets, remnants of that ancient era. These celestial wanderers carry within them a whisper of the past, a potential Rosetta Stone of pan-Christic origins.

1. The Whispers of Life in Comets: These icy celestial bodies are time capsules, frozen in the deep space for billions of years. Their pristine makeup holds traces of the protosolar nebula, offering a glimpse into the primordial soup from which life may have arisen. Recent missions like Rosetta have detected a remarkable variety of complex organic molecules within comets, including amino acids, the very building blocks of proteins. Could these be mere random products of cosmic chemistry, or do they resonate with the "life essence" proposed by pan-Christic biogenesis? Perhaps their specific arrangement, their very presence within the icy embrace of a comet, speaks of a guiding force, a hidden order beyond the realms of pure chance.

2. Asteroids: Fossilized Seeds of Pan-Christic Potential: While lacking the icy embrace of comets, asteroids offer another window into the early solar system. Composed of rocky remnants from the protoplanetary disk, they too can harbor organic compounds and offer insights into the initial distribution of these life-giving molecules. The presence of complex amino acids in certain meteorites further fuels the fire of pan-Christic inquiry. Could these be traces of a proto-ecosystem, an early spark of life nurtured by the "order and synchronization" forces within the protoplanetary disk? Or are they merely echoes of a cosmic game of chance, devoid of any divine orchestration?

3. The Link Between Proto-Solar System and Life's Essence: Tracing the connection between these primordial traces of life and the pan-Christic concept of "life essence" requires venturing beyond the realm of physical evidence. It asks us to contemplate the interplay between the material and the divine, the dance between the building blocks of life and the spark that animates them. Perhaps the protosolar nebula, with its rich prebiotic soup and intricate dance of forces, represents not just a random scattering of materials, but a crucible where the "life essence" first infused into existence, imbuing even the nascent forms of life with a potential for growth and evolution.

While definitive proof of pan-Christic biogenesis may remain elusive, the very act of seeking its traces in the proto-solar system pushes the boundaries of our understanding. It compels us to consider the possibility that life is not merely a product of chance collisions and ruthless competition, but a symphony orchestrated by hidden forces, both material and divine. The whispers of life in comets, the fossilized potential in asteroids, and the grand cosmic story of the protoplanetary disk all become potential clues in this

grand detective story, urging us to listen for the echoes of pan-Christic biogenesis in the very origins of our solar system.

The search for life's origins, then, becomes not just a scientific pursuit, but a philosophical and spiritual one as well. It invites us to embrace the mystery, the interconnectedness, and the possibility of a universe imbued with meaning beyond the material. And perhaps, in this very act of seeking, we may uncover not just traces of life, but a deeper understanding of our own place within the grand symphony of existence.

Concluding remarks

In conclusion, while Darwin's name rightfully adorns the pages of "On the Origin of Species," we must remember the vital contributions of Lamarck, Wallace, and Malthus. Their ideas provided the soil from which Darwin's genius blossomed, reminding us that scientific breakthroughs are rarely solitary endeavors, but often the fruit of a shared intellectual landscape.

We also consider several alternative hypotheses beyond out of Africa theory. Nonetheless, it shall be kept in mind, that the present review article is meant to explore alternative perspectives and does not endorse any specific unproven theories. It should be read as a thought-provoking exercise in considering the complexities of human origins.

We then consider that the alluring proposal of pan-Christic biogenesis, with its focus on hidden forces and divine essence intertwined with evolution, invites us to peek beyond the established narratives of life's emergence. To lend concreteness to this theoretical framework, let's turn our gaze towards the very birth of our solar system, seeking traces of *pan-Christic biogenesis* in the primordial dance of dust and gas that gave rise to our celestial home.

The search for life's origins, then, becomes not just a scientific pursuit, but a philosophical and spiritual one as well. It invites us to embrace the mystery, the interconnectedness, and the possibility of a universe imbued with meaning beyond the material. And perhaps, in this very act of seeking, we may uncover not just traces of life, but a deeper understanding of our own place within the grand symphony of existence.

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